

SOME NEW THYSANOPTERA FROM SOUTHERN CALIFORNIA, I

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In collections made by the writer in the vicinity of Claremont, ten different species are represented, three of which are new, besides a new variety of a species previously described, and one new genus.

Ankothrips, new genus.

Antennae strongly geniculate, with the tip of second segment strongly produced inwardly beyond insertion of third (Fig. 45 I).

Head broader than long, reticulated posteriorly; ocelli present in both sexes. Antennae nine-segmented, all segments free; without long spines. Maxillary palpi three-segmented; labial palpi two-segmented. Prothorax shorter than head, with bristles on both anterior and posterior angles. Fore-femora thickened in both sexes. Wings present in both sexes; the forewing with two longitudinal veins and five cross veins; anterior margin with a row of unusually strong spines. Anterior wings colored a uniform pale brown; posterior wings clear white. Abdomen with several stout spines on posterior angles of each segment; last two segments with extremely long strong bristles.

Ankothrips robustus, n. sp.

Average length, 1.46 mm. General color, dark brown to black.

Head (Fig. 45 C) somewhat wider than long, rounded and slightly narrowed anteriorly; with subrectangular projection over insertion of antennae bearing two spines; cheeks arched; back of head reticulate; with several very long spines around the eyes. Eyes prominent, black, coarsely faceted, slightly pilose. Ocelli present, placed well forward; posterior ocelli nearly contiguous with inner margin of eyes. Mouth cone reaching five-sixths the length of prothorax; bluntly pointed; maxillary palpi with terminal segment very small. Antennae (Fig. 45 H) less than twice as long as head, brown, unicolorous with body; each segment with from six to ten small spines on distal end; small sense areas on segments four to seven.

Prothorax (Fig. 45 C) about twice as wide as long and shorter than head; with two large spines on each anterior and posterior angle, and two midlaterals on each side; with a row of twelve conspicuous spines on posterior dorsal margin and several scattered on dorsal surface. Thorax broadest across mesothorax. Metathorax tapering roundly from mesothorax to abdomen. Legs (Fig. 45, G, F, and E) dark brown, a trifle lighter than the body; clothed rather sparsely with bristles; fore-legs very large, with femora and tibiae strongly thickened; fore-coxae with several large conspicuous spines; fore and second tibiae with two long spines at tip, and hind tibiae with several; tarsi with only a few spines. Forewings (Fig. 45 A) broadly rounded at tip, and somewhat narrowed after the mid-cross vein; with two prominent longitudinal veins

extending from base to tip; anterior longitudinal connected with ring vein by two distinct cross veins, and with the posterior longitudinal by one large cross vein in center of wing; posterior longitudinal connected with ring vein by two slightly less distinct cross veins; both longitudinal veins with a row of conspicuous spines; twenty-five on the anterior and eighteen on the posterior; anterior margin a row of stout spines, and a short fringe appearing about the middle of margin and increasing in length toward the tip; posterior margin with long double fringe; entire surface covered with microscopic hairs. Forewings light brown; hind wings clear white, and margined on both sides with a long fringe.

Abdomen ovate, about half as broad as long; uniform brown; segments four to seven with a row of short spines on the dorsal surface, and all segments with several longer spines on edges and posterior angles; last three segments (Fig. 45 B) with numerous very long, stout bristles; three last segments form sheath for large upturned ovipositor.

Measurements: Head, length, .18 mm. (.15 - .21 mm.), width .21 mm.; prothorax, length .15 mm., width .27 mm.; mesothorax, width .26 mm.; abdomen, width .32 mm.; total length 1.46 mm. (1.28 - 1.65 mm.) Antennae: I .025 mm., II .067 mm., III .054 mm., IV .040 mm., V .041 mm., VI .040 mm., VII .027 mm., VIII .018 mm., IX .023 mm.; total, .32 mm.

MALES.—Males somewhat smaller than females; legs slightly lighter than body; abdomen very dark brown to black, darker than thorax, with a broad, white intersegmental membrane between first and second segments, appearing as a white band across the abdomen. Ninth abdominal segment with four very long bristles (Fig. 45 D), and twenty shorter but extremely stout spines (almost teeth) on dorsal surface; anal segment with a partially covered depression on dorsal surface, and two claspers on ventral side; four very long bristles at tip of abdomen.

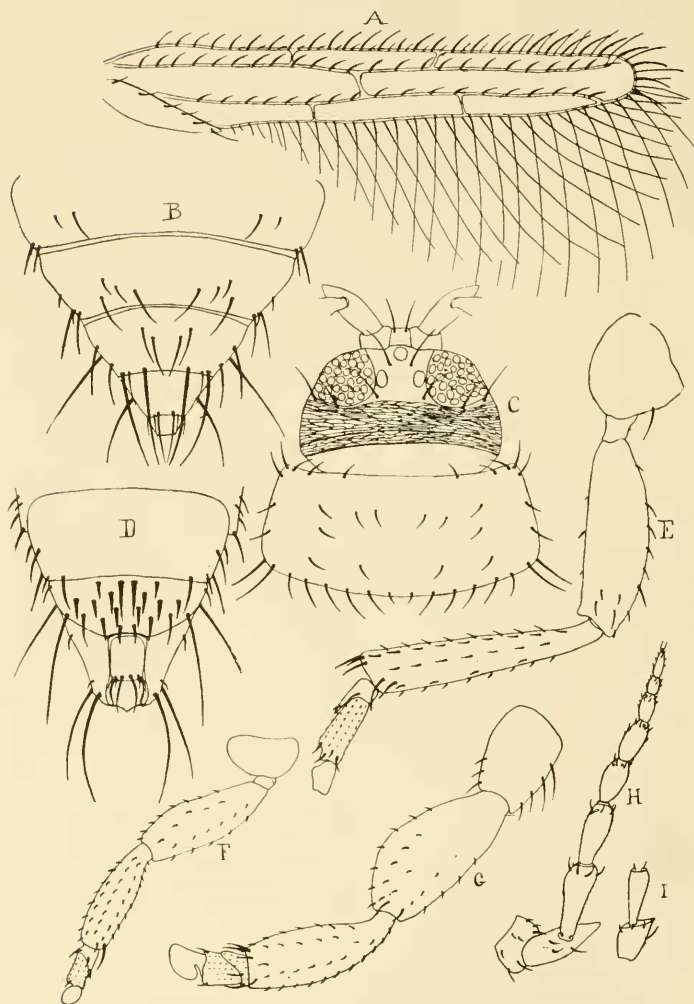
Described from five females and three males.

Food plant: California laurel (*Umbellularia*) and Cal. lilac (*Ceanothus*).

Locality: Cañon near Claremont, Cal.; altitude, 5000 ft. (Crawford.)

Acolothrips longiceps n. sp.

Head (Fig. 46 F) as long as wide, rounded in front and slightly elevated between basal segments of antennae; distance from eye to occiput unusually long; cheeks arched; with many inconspicuous spines on the dorsal surface and several on the ventral. Eyes prominent, pilose, with dark encircling ring; facets large, well separated. Ocelli present, placed well forward on anterior part of head, posterior ocelli almost contiguous with inner margin of eyes. Mouth cone long, reaching three-fourths the length of the prothorax, subacute; maxillary palpi three segmented, basal segment large, terminal very small; labial palpi four segmented. Antennae (Fig. 46 B) nine segmented, a little more than twice as long as head; light brown, lighter than body, except segments four and five, which are unicolorous with body; third light lemon yellow with darker area at distal end; all segments, except two basal ones, thickly and uniformly clothed with stout spines; basal segments with fewer spines;

Figure 45. *Ankothrips robustus*.

spines on third very light colored; sense area on distal portion of third and fourth, and conspicuous sense cone on lower side of fifth near tip; two conspicuous long spines on tip of ninth.

Prothorax one and one-half times as wide as long, and wider than head, with an emargination and thickening of wall on each side; with several small inconspicuous spines on dorsal surface. Thorax broadest across mesothorax. Metathorax with sides tapering uniformly, and quite noticeably posteriorly. Legs (Fig. 46 A, C, D) dark brown, except fore-tibiae, which are lighter; fore-femora thickened; fore-tibiae with conspicuous long spine on inner side near the middle (Fig. 46 A); fore- and second tibiae with two stout spines at tip, and posterior tibiae with several stouter spines at tip; fore-tarsi armed with a stout hook and tooth and overreaching spine; legs thickly clothed with conspicuous spines, and the second and posterior tibiae and tarsi with numerous microscopic hairs. Fore-wings (Fig. 46 E) broadly rounded at tip and slightly broadened in distal half; with no longitudinal veins whatever, but two rows of spines extending the entire length of the wing; the anterior row is white and inconspicuous, but the posterior row brown and distinct; anterior margin without fringe, but having a row of short spines; posterior margin with long fringe of cilia; wings clear white with dark brown longitudinal band covering posterior half of wing, extending from near base to near tip; microscopic hairs on clear portion white, on brown portion brown. Posterior wings clear white, except small brown longitudinal band near base; without longitudinal veins; with simple fringe on posterior margin.

Abdomen widest at seventh segment, about one-third as wide as long; first segment lightest in color, the rest shading uniformly to dark brown at ninth segment; segments three to seven with dark transverse line near anterior margin. One small spine on posterior angles of eighth segment, and several on ninth, which bears two large articulated claspers (Fig. 46 G); six very long and stout and several smaller spines on tip of ninth segment; posterior ventral margin of ninth segment with deep indentation, reaching one-third the length of segment.

Measurements: Head, length .17 mm., width .17 mm.; prothorax, length .13 mm., width .20 mm.; mesothorax, width .25 mm.; abdomen, width (at seventh segment) .26 mm.; total length of body 1.33 mm. Antennae: I .034 mm., II .051 mm., III .098 mm., IV .083 mm., V .080 mm., VI .010 mm., VII .010 mm., VIII .08 mm., IX .09 mm.; total .38 mm.

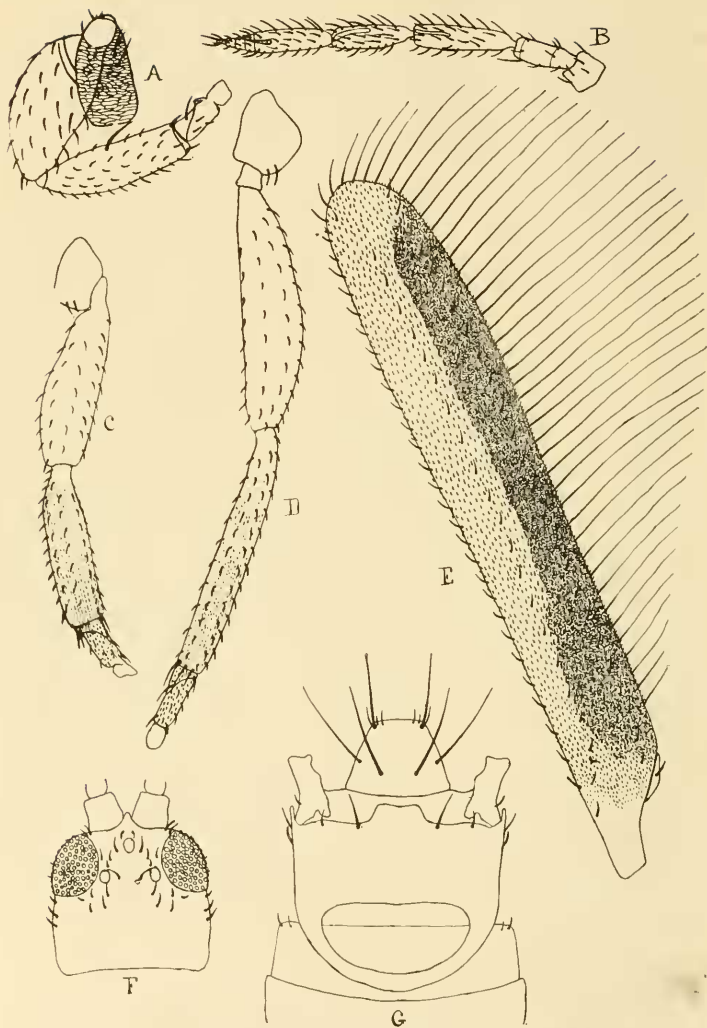
General color, brown; head, pro- and mesothorax brown; metathorax and first five abdominal segments lighter; remaining abdominal segments shading to dark brown.

Described from one male.

Food plant: *Artemisia*.

Locality: Claremont, Calif. (Crawford.)

This species in general appearance is close to *Acolothrips kuvanaui*, Moulton, but in having no longitudinal veins in anterior wings it not only differs sharply from that species, but presents a slight departure from current descriptions of the family.

Figure 46. *Aeolothrips longiceps*

***Euthrips minutus* var. *setosus* n. var.**

The specimens of this variety resemble very closely *Euthrips minutus*, Moulton, but possess several distinctive characters, which, however, are hardly of specific value. In the description, only the diagnostic characters will be mentioned.

Anterior margin of head (Fig. 47 A) with distinct notched prolongation of vertex between insertion of antennae. Antennae (Fig. 47 F) nearly three times as long as head.

Prothorax (Fig. 47 A) with anterior margin reticulate; two spines on each anterior angle; four long spines on posterior margin; without a spine on lateral side of posterior angle. Anterior margin of wing (Fig. 47 G) with twenty-two spines; fore vein with nineteen spines; hind vein with fourteen.

Abdomen (Fig. 47 B) with two conspicuous spines on each side of every segment, and two on the dorsal surface of each segment.

Measurements: Head, length .076 mm., width .14 mm.; prothorax, length .125 mm., width .18 mm.; mesothorax, width .24 mm.; abdomen, width .29 mm.; total length 1.28 mm. (.91 - 1.65 mm.). Antennae: I .015 mm., II .032 mm., III .035 mm., IV .039 mm., V .030 mm., VI .041 mm., VII .08 mm., VIII .013 mm.; total .28 mm. Color, uniform light to dark brown; wings, gray-brown.

Described from numerous females.

Food plants: Certain Compositae, *Rhamnus crocea*, *Monardella lanceolata*, *Sambucus glauca*, and other flowers.

Locality: Claremont, Calif. (Crawford.)

***Phyllothrips fasciculata* n. sp.**

Average length 1.55 mm.; general color very dark brown to black.

Head (Fig. 48 A) a little more than one and one-half times as long as wide, widest posteriorly, narrowed anteriorly; frons projecting over insertion of basal segments of antennae, with anterior ocellus on vertex; back of head slightly reticulate and conspicuously serrated, and set with small spines raised on inconspicuous tubercles; post-ocular spines long, and blunt at tip. Eyes medium, finely faceted, slightly pilose, light brown. Ocelli present, anterior ocellus on apex of produced part of vertex above insertion of antennae, and directed forward; posterior ocelli nearly contiguous with inner concave margin of eyes. Mouth cone short and broadly rounded, reaching scarcely half the length of prothorax; maxillary palpi long and slender. Antennae (Fig. 48 D) eight-segmented, only a little longer than head; two basal segments almost black, three light yellow, the remaining segments brown; sense area on two and seven; two sense cones on distal end of three to six, inclusive; antennae sparsely clothed with small spines.

Prothorax (Fig. 48 A) more than twice as wide as long, very much wider posteriorly than anteriorly; with one spine on anterior angles, one on posterior, and one midlateral about equal in length to the one on anterior angle; a few spines on posterior margin. Pterothorax with sides almost parallel, converging

slightly posteriorly; coxae somewhat protruding. Legs (Fig. 48 E, F, G) sparsely clothed with inconspicuous hairs or spines; fore-femora somewhat enlarged; with a membranous appendage near distal end within; tibiae with a few short spines; fore-tarsi with conspicuous tooth on inner side of basal joint. Wings fully developed, both pairs alike; with no venation or spines;

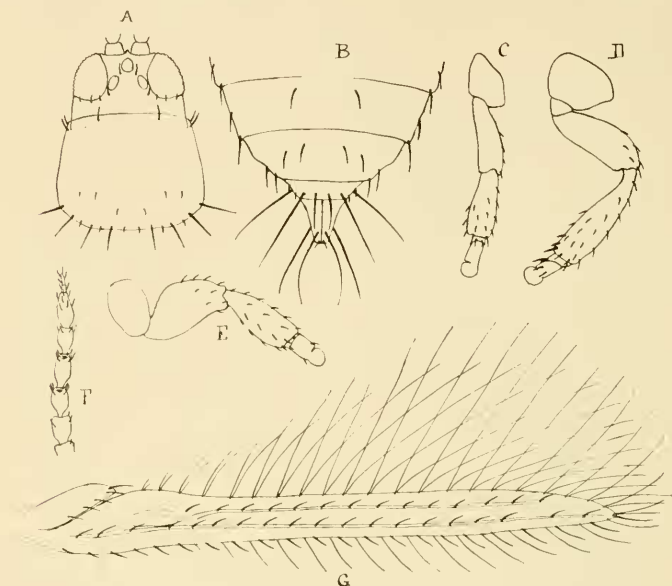


Figure 47. *Euthrips minutus* var. *setosus*.

both anterior and posterior margins with long simple fringe.

Abdomen about as wide as pterothorax; intersegmental membrane as dark as segments. Segments one to six, inclusive, with a row of two spines on each segment about 0.1 mm. from each margin, and two spines on each posterior angle; segments seven and eight (Fig. 48 C), with several spines on each posterior angle; tube about half as long as head, and converging toward tip; with four long, and several short spines at tip.

Males are similar to females in most respects and averaging fully as large; with distinct scale at base of tube (Fig. 48 B); tube shorter than in female, with six long spines and several short ones at tip; with a long setigerous tubercle on ventral surface near base.

Measurements (female): Head, length .28 mm., width .17 mm.; prothorax, length .14 mm., width .31 mm.; pterothorax, width .32 mm.; abdomen, length .81 mm.; tube, length .14 mm.; total length of body 1.55 mm. (1.28 -

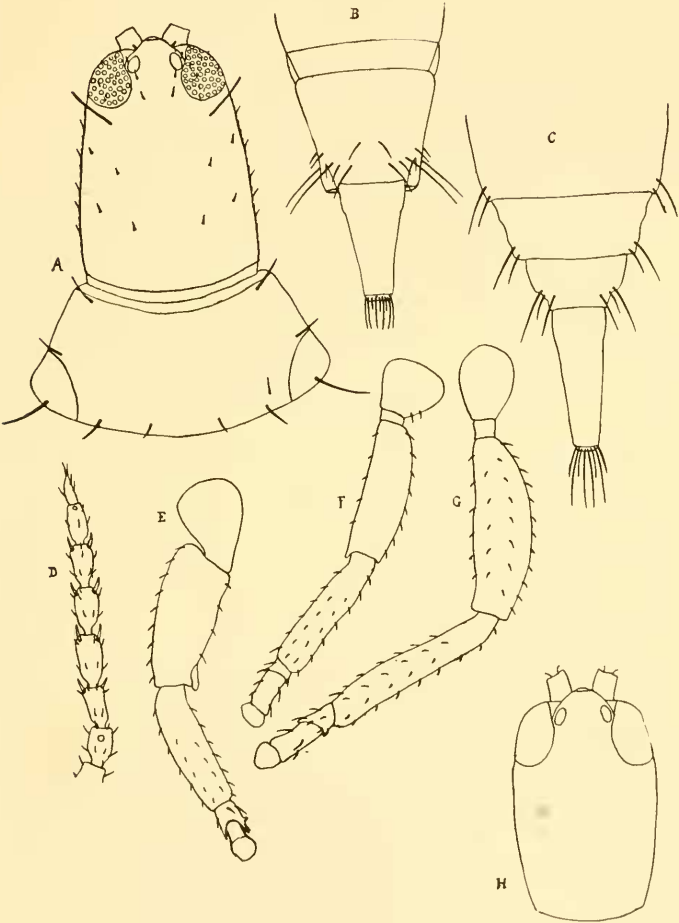


Figure 48. *Phyllothrips fasciculata*

1.81 mm.). Antennae: I .027 mm., II .040 mm., III .044 mm., IV .055 mm., V .053 mm., VI .051 mm., VII .045 mm., VIII .025 mm.; total .34 mm.

Described from many specimens of both sexes.

Food plant: *Eriogonum fasciculatum* (Wild Buckwheat).

Locality: Claremont, Calif. (Crawford.)

This species undoubtedly belongs in the genus *Phyllothrips*, being closely related to *P. aspersus* Hinds, and to *P. citricornis* Hood, but differs from the generic description as given by Mr. Hood, in the following points: Head narrowed anteriorly instead of posteriorly. Mouth cone very blunt, reaching to middle of prothorax. Fore-tarsi in both sexes with small tooth. It, however, shows abundant evidence of the closest relationship to the other species of *Phyllothrips*, even in minor details.

***Phyllothrips fasciculata* var. *stenocephs*, n. var.**

The specimens of this variety (Fig. 48 H) resemble the species *fasciculata* in almost every respect, but differ in the following: the insect is somewhat smaller, and the head converges distinctly posteriorly instead of anteriorly. The specimens were taken among specimens of *P. fasciculata*. The existence of this variety shows that the form of the head does not furnish in this genus a character of even certain specific value.